DOD AUTOMATIC IDENTIFICATION TECHNOLOGY IMPLEMENTATION PLAN FOR SUPPLY AND DISTRIBUTION OPERATIONS

VOLUME I

MARCH 2008

Foreword

This plan provides a roadmap for implementing the United States Transportation Command's (USTRANSCOM) June 2007 *DoD Automatic Identification Technology Concept of Operations (CONOPS) for Supply and Distribution Operations.* It incorporates the combined ideas and efforts of all of the stakeholders responsible for DoD's logistics supply and distribution activities. By completing the tasks contained in this plan, DoD will realize the benefits of the standard application of Automatic Identification Technology (AIT) as defined in the CONOPS.

Since being designated as the Distribution Process Owner (DPO), and the lead functional proponent for Radio Frequency Identification (RFID) and related AIT Implementation within the DoD supply chain, USTRANSCOM has focused on coordinating the use of AIT throughout the supply chain to maximize the effectiveness of deployment and distribution decision-making. USTRANSCOM will continue to assess advances in technology, examine future trends, and update strategies to provide our warfighters with the best possible integrated, end-to-end solutions. As a primary enabler to the broader deployment and distribution enterprise, AIT plays a key role in providing DoD decision makers with the ability to shape and respond to our ever-changing force requirements.

This plan approaches the implementation of AIT from a global supply and distribution perspective, supported by a detailed analysis of the supply chain data and process segments. As a result of the supporting analysis, the plan identifies specific tasks needed to realize and leverage the many benefits that AIT offers DoD's logistics processes and procedures. The tasks contained in this plan do not change existing organizational missions, roles, and responsibilities; rather, they facilitate the handoffs that are common throughout our supply chain. The plan also addresses the detailed actions and milestones necessary to improve the oversight, management, interoperability, safety, and security of AIT across the entire DoD supply chain and establishes measures of performance to track our progress.

I ask for continued deployment and distribution community support to provide the necessary resources and level of effort to propel each of the plan's tasks to completion.

NORTON A. SCHWARTZ
General, USAF
Commander

Executive Summary

The Department of Defense (DoD) has used automatic identification technology (AIT) as a data capture tool for more than a quarter century, starting with linear bar codes and progressing to a variety of more advanced technologies. DoD has explored use of a wide variety of AIT through prototypes and implementations throughout the Services and Agencies. Within the past 5 years, the warfighting Combatant Commands (COCOMs), Services, and Combat Support Agencies have leveraged technological advances in AIT and wireless communications to improve data quality and partially fill the asset visibility gaps that have remained a challenge for the warfighter.

In a September 2006 memorandum, the Under Secretary of Defense for Acquisition, Technology and Logistics, or USD (AT&L), designated U.S. Transportation Command (USTRANSCOM), in its role as the Distribution Process Owner (DPO), to be the lead functional proponent for radio frequency identification (RFID) and related AIT implementation throughout the DoD supply chain. This memorandum also directed that the Commander, USTRANSCOM, develop a DoD AIT concept of operations (CONOPS) and AIT implementation plan. A key goal of USTRANSCOM in this functional proponency role is to ensure that AIT use throughout the supply chain is coordinated to maximize the effectiveness of deployment and distribution decisions.

In compliance with the direction contained in the USD (AT&L) memorandum, USTRANSCOM led an effort within the DoD supply and distribution communities to create a joint CONOPS that identified AIT for assets by consolidation layer—from the item itself through its individual packages, cartons, consolidated shipments in pallets or intermodal containers, to the conveyances moving the materiel through various supply chain nodes. The CONOPS further identified a baseline set of AIT media for application in all situations, including primary AIT to be used whenever possible, and backup AIT for downstream supply chain participants to use as an alternative in those situations where the primary AIT is non-responsive or is unable to be used due to business process nuances, available infrastructures, or safety considerations. The CONOPS also

identified sets of potential premium AIT media by consolidation layer for providing visibility and enhanced monitoring or tracking of materiel, as needed.

The backbone of the CONOPS is a blend of passive and license plate active RFID tags and two-dimensional (2D) symbols. The intent is to facilitate mainstream logistics applications by identifying a baseline set of AIT that can be relied upon from one segment of the supply chain to the next. When this baseline is implemented, stakeholders performing continuous process improvement reengineering initiatives will be able to use it for anchoring their data capture solutions.

The CONOPS, which has an intended horizon of FY2010–2015, provides a vision for using AIT for efficient and effective data capture within supply and distribution operations. As defined in the CONOPS, the primary AIT will be used to capture the identity of materiel or packaging at each layer of consolidation to improve operational efficiencies and provide track and trace capability within DoD's supply and distribution operations. This vision for consistent, coordinated use of AIT media throughout DoD's supply and distribution processes, should be used as a blueprint to achieve seamless AIT and asset visibility.

Development of this implementation plan was initiated following issuance of the CONOPS. USTRANSCOM and the Office of the Secretary of Defense, Supply Chain Integration (OSD/SCI), led the effort. The intent of this initial iteration of the plan is to create a road map with specific tasks for the Spiral One effort designed to create the initial momentum needed to transform the current AIT environment to the vision in the CONOPS not later than (NLT) FY2015.

The success of implementing the CONOPS is a shared responsibility. In consonance with existing DoD AIT policies and the assignment of the DPO as the DoD lead in implementing AIT, each DoD component is expected to commit the necessary resources and focus collective efforts to implement the CONOPS to achieve a more efficient supply chain that meets warfighter requirements in peace and war. USTRANSCOM, Office of the Secretary of Defense (OSD), each office of primary responsibility (OPR), and task participants identified in this implementation plan should be programming and executing both centralized Service funding sources and internal funding and personnel to complete the tasks that are identified through the implementation horizon.

The following are the types of tasks to be accomplished by the implementation teams:

1.0 Report baseline "as-is" operational metrics

2.0 Reengineer selected processes in each supply chain segment to enable automated use of the primary AIT as defined in the CONOPS

3.0 Identify and define requirements necessary to modify automated information system (AIS) and middleware to enable the automated use of the primary AIT within the selected processes

4.0 Modify AIS and middleware to enable the automated use of the primary AIT within the selected processes

5.0 Procure, install, and operate the AIT equipment at appropriate locations and facilities

6.0 Measure and report business benefit metrics, including return on investment (ROI), of AIT-enabled processes.

From this initial spiral effort, DoD will gain critical knowledge in actually integrating AIT into a key set of business processes and AISs and obtain the quantitative evidence needed to expand into future spirals specified in this document. This implementation plan, an integral piece of the Joint Deployment and Distribution Enterprise (JDDE), is a living document that embodies a spiral, iterative approach to applying the appropriate AIT media at each layer of consolidation in the supply chain. The initial release of the plan contains specific tasks to be completed during the first spiral of the implementation process. The annexes to this plan provide considerations for defining implementation tasks for future spirals. As these tasks are further identified, the implementation teams (led and staffed by various stakeholders throughout the DoD supply chain) will document the subsequent revisions to this implementation plan. The implementation teams will meet on a regular basis to discuss the status of their tasks, and identify progress and issues. The USTRANSCOM Asset Visibility Division will manage this implementation plan and the incorporation of team tasks, team progress, and outcomes.

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Chapter 1
Introduction and Background

Automatic identification technology (AIT) is an important tool that DoD has used in various forms for automatic capture of data to provide inside the box visibility and to identify, track, document, and control assets, including materiel for deploying and redeploying forces as well as equipment, personnel, and sustainment cargo. Efficient data capture, enabled by AIT, normally improves the accuracy and speed of data processed and stored by DoD's AISs. AIT, encompassing a variety of data storage and carrier technologies, integrates with logistics information systems as a key enabler in the DoD's asset visibility efforts. In 2006, the Under Secretary of Defense for Acquisition, Technology and Logistics, or USD(AT&L), designated USTRANSCOM, in its role as the Distribution Process Owner (DPO), as the lead functional proponent for radio frequency identification (RFID) and related AIT implementation throughout the DoD supply chain. A key goal of USTRANSCOM in this functional proponency role is to ensure that AIT use throughout the supply chain is coordinated to maximize its effectiveness, with minimal redundancies or conflicting technologies, as a means to achieve asset visibility.

A coordinated concept of operations (CONOPS)[1] was signed by USTRANSCOM in June 2007. The CONOPS is a living document that will be updated as needed through 2015. The CONOPS identifies various reasons for AIT use, the types of AIT media, and their key attributes. It also progresses through a logical evaluation of each medium based on how the DoD supply chain operates and designates a primary and backup baseline set of AIT media. The CONOPS further designates sets of "premium" media that may be required based on a defined set of conditions that require AIT capabilities beyond the designated baseline. The CONOPS horizon for achieving this end-state is 2015, allowing for funding within the FY2010 to FY2015 budget cycles.

The intent of the CONOPS was to provide the vision for the application of AIT in DoD supply and distribution operations. A key component of that vision is the concept of which AIT will be applied to items and consolidated configurations of multiple items.

Vision: As defined in the CONOPS, the primary AIT will be used to capture data about materiel or packaging at each layer of consolidation to improve operational efficiencies and provide track and trace capability within DoD's supply and distribution operations. This vision for consistent, coordinated use of AIT media throughout DoD's supply and distribution processes should be used as a blueprint to achieve seamless AIT use and enable improved asset visibility.

[1] U. S. Transportation Command, *DoD Automatic Identification Technology Concept of Operations (CONOPS) for Supply and Distribution Operations*, June 2007.

Figure 1-1 shows the CONOPS' AIT designations by consolidation layer.

Figure 1-1. AIT Designations per Consolidation Layer

	Linear Bar Code	2D Symbol	Passive RFID***	Contact Memory Button	OMC or Mini-CD	Active RFID (Data Rich)	Active RFID (License Plate)	Sensor Technology	Satellite or Cellular
Layer 0* (Item)	IUID**	IUID Data Matrix	Inv Data	Mntnce Data			Unit Move Equip	Safety Security Perishable	Location Safety Security
Layer 1 (Package)		PDF 417						Safety Security Perishable	
Layer 2 (Trnsprt Unit)		PDF 417						Safety Security Perishable	
Layer 3 (Unit Load)		PDF 417				Content Data	Location	Safety Security Perishable	
Layer 4 (463L/Cont)		PDF 417				Content Data		Safety Security Perishable	Location Safety Security
Layer 5 (Vehicle)						Content Data	Location	Safety Security Perishable	Location Safety Security

Primary Baseline AIT
Backup Baseline AIT
Premium Service AIT
Not Recommended

* For Layer 0 non-IUID items, no AIT is required.

** For Layer 0, linear bar codes are backup baseline AIT for only selected data elements of IUID items.

*** Passive RFID is the primary AIT at the MRO and requisition level.

The USTRANSCOM Commander hosted a Joint AIT Summit at USTRANSCOM Headquarters, Scott AFB, IL, in October 2007. At that summit, the Joint logistics leadership[2] agreed upon the vision for the use of AIT provided by the CONOPS. It also agreed upon a Joint approach to the implementation of the vision and to take short-term actions to build long-term enterprise outcomes. The leadership further decided that the implementation will be a Joint, unified approach that takes advantage of opportunities to cooperatively apply resources to Joint enterprise activities. Ongoing initiatives will be leveraged to facilitate implementation action. These agreements provided the framework for this plan with the intent to implement the vision stated in the CONOPS.

This *DoD Automatic Identification Technology Implementation Plan for Supply and Distribution Operations* serves as a roadmap for transitioning from the cur-

[2] Assistant Deputy Under Secretary of Defense – Supply Chain Integration, Joint Staff/J4, US Army, US Air Force, US Navy, US Marine Corps, Defense Logistics Agency, Joint Forces Command, Air Mobility Command, Surface Deployment and Distribution Command, Military Sealift Command, Army and Air Force Exchange Service, Defense Commissary Agency, and General Services Administration

rent AIT environment to the envisioned FY 2015 environment outlined in the CONOPS. The approach to the implementation will be accomplished through a series of three spirals:

- Spiral 1: FYs 2008–2009
- Spiral 2: FYs 2010–2011
- Spiral 3: FYs 2012–2015.

This initial plan outlines the first spiral (FYs 2008–2009) of the implementation. It defines specific, short-term tasks intended for the purpose of accomplishing basic receipt and in-check functions at specified locations. Its intent is to create the momentum needed to fully integrate AIT into a few key business processes, capture results, and determine the resulting return on investment (ROI) benefit from leveraging the AIT, which will guide the direction and content of additional tasks for future spirals. It identifies five implementation teams focusing on specific supply chain segments. These teams will provide regularly scheduled reports on their progress, as well as define additional tasks for future spirals. The second spiral will expand upon the implementation completed during the first spiral, leverage lessons learned, and complete additional specific tasks identified in the first spiral. A third spiral will complete the implementation, realizing the AIT vision presented in the CONOPS by FY 2015.

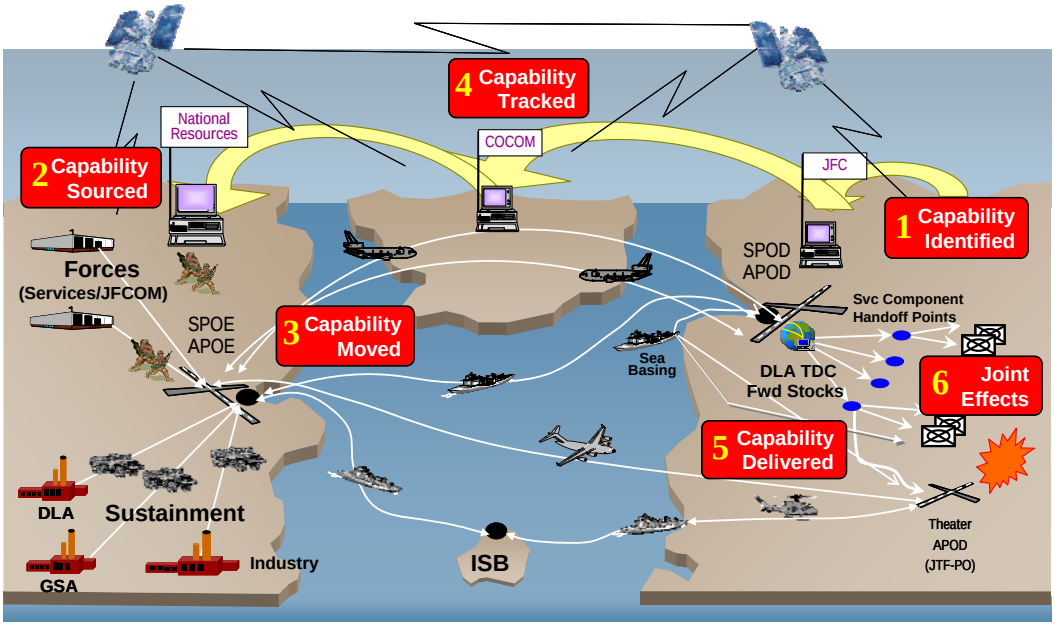
While developing this plan, the implementation teams explored and identified the business process, AISs, special situations, specific constraints, and other nuances that must be identified, reviewed, and resolved to posture the community to answer the questions of the appropriate AIT media application for each consolidation layer. This effort has been captured in Volume II of the implementation plan. This volume identifies additional considerations that must be evaluated, converted into specific tasks, and completed by the implementation teams in future spirals.

The plan also identifies approximately $744 million of programmed AIT-related funding that should be examined in depth and managed with a collaborative portfolio management methodology to avoid duplication and ensure that expenditures are consistent with this plan. As various tasks within the implementation plan are worked, it is anticipated that those efforts will identify new implementation opportunities for later spirals and provide enough data points to prepare rough estimates for revised POM submissions.

This plan is considered a “living” document subject to change throughout its 7-year implementation plan horizon. The implementation plan further provides a process for regular updates to each task, such as changes in status, issues, scope, timelines, and cost. The plan will be reviewed every year and updated in recognition of the changing environment, evolving roles, technological advancements and continuing transformation in DoD.

A successfully implemented CONOPS is an important element of the Joint Deployment and Distribution Enterprise (JDDE). The JDDE is a complex set of equipment, procedures, doctrine, leaders, technical connectivity, information, shared knowledge, organizations, facilities, training, and materiel necessary to conduct Joint distribution operations. The most important contribution of this CONOPS to the JDDE, and to enhancing mission success at the point of effect, is the production of end-to-end visibility and operational efficiencies (see Figure 1-2).

Figure 1-2. The Joint Deployment and Distribution Enterprise



The success of implementing the CONOPS is a shared responsibility. In consonance with existing DoD AIT policies and the assignment of the DPO as the DoD lead in implementing AIT, each DoD component is expected to commit the necessary resources and focus collective efforts to implement the CONOPS to achieve a more efficient supply chain that meets warfighter requirements in peace and war. USTRANSCOM, Office of the Secretary of Defense (OSD), each office of primary responsibility (OPR), and task participants identified in this implementation plan should be searching for Service organic funding sources and personnel to complete the tasks that are identified through the implementation horizon.

The balance of Volume I of the implementation plan is organized as follows:

- Chapter 2 describes the implementation teams and their initial tasks. It also describes the timeline, funding, and resources for the initial spiral.
- Chapter 3 identifies the plan management and update process, including the organizations that are involved in governance of the implementation plan, along with their roles and responsibilities. It also describes the

framework for future CONOPS and implementation plan spirals, as well as the management and update process.

Volume II contains detailed annexes developed by the implementation teams. These annexes will be used by the teams as considerations to guide the definition of subsequent spirals of this plan.

- Annex 1 presents Global Team considerations.
- Annex 2 presents Wholesale Team considerations.
- Annex 3 presents Strategic Distribution Team considerations.
- Annex 4 presents In-Theater/Retail Team considerations.
- Annex 5 presents Unit Move Team considerations.
- Annex 6 contains tasks that fall outside the scope of the initial implementation efforts (2008–2015), but will be considered in future spirals for implementation (beyond 2015).
- Annex 7 addresses standards for AIT technology, technical conformance, data content, networks, and applications.

Chapter 2
Implementation Tasks Summary

This chapter provides a high-level summary of the implementation tasks. The first release of the implementation plan contains specific tasks for the first spiral. Lessons learned from this spiral and consideration of the tasks provided by the implementation teams in Volume II will result in definitive tasks assigned to subsequent spirals that will be included in later releases of this implementation plan. *The tasks in italics are directly from the 23 October 2007 Joint AIT Summit.*

IMPLEMENTATION TEAMS

The DoD AIT Synchronization IPT (Integrated Process Team) was divided into five implementation teams to focus on specific segments of the supply and distribution operations. The five implementation teams listed below developed the tasks defined in the Volume II annexes of this plan:

1. Global—Co-leads: USTRANSCOM and OSD/SCI (Supply Chain Integration). This team is responsible for issues that impact overall supply and distribution operations, as well as issues that impact the supply chain segment seams. It also is responsible for integration of all tasks developed by the other four teams.

2. Wholesale—Lead: Defense Logistics Agency (DLA). This team is responsible for issues and processes concerning materiel acquisition as it applies to vendor shipping practices, government and contracted commercial distribution centers, and cross-dock operations, including Theater Consolidation and Shipping Points (TCSP) and other DLA distribution operations.

3. Strategic Distribution—Lead: USTRANSCOM. This team is responsible for issues and processes concerning shipment, sea and aerial ports of embarkation and debarkation, and delivery to destination.

4. In-Theater/Retail—Lead: Navy. This team is responsible for issues and processes concerning installations and processes within any theater or retail system.

5. Unit Move—Lead: Joint Forces Command (JFCOM). This team is responsible for issues and processes specific to the movement of unit equipment from home station to deployment destination, including redeployment.

IMPLEMENTATION TASKS AND TIMELINE

Spiral One

The following tasks have been identified for implementation during the first spiral (FYs 2008–2009) based on Senior Leader guidance at the 23 October 2007 AIT Summit. Updates will be provided by the implementation teams at regularly scheduled DoD AIT Synchronization IPT meetings.

1. Global Team

1.1. Pursue Collaborative Management Methodology. NLT: 30 September 09

1.1.1. Finalize Service, DLA, and USTRANSCOM AIT budget analyses (with assistance of the Components) to break down funding into comparable elements, identify areas to champion investment in specific AIT capabilities, and reduce redundant or duplicative efforts across DoD. NLT: 31 March 2008

1.1.1.1. Finalize synchronization of FY 2010 program objective memorandum (POM) changes. NLT: 31 March 2008

1.1.2. Review architecture and standards to promote effective scalability and interoperability when identifying systems, AIT equipment, and software to be deployed. NLT: 30 September 2009

1.1.2.1. Define standards for the active RFID license plate tag, in concert with the In-Theater/Retail Team, Strategic Distribution Team, Wholesale Team and Unit Move Team, based on defined user requirements to include tagging of transportation assets such as containers and pallets as well as tagging assets such as vehicles and equipment. NLT: 30 September 2008

1.1.2.2. Engage Department of Homeland Security (DHS) to coordinate governmental standards for AIT. NLT: 30 June 2008

1.2. Pursue Metrics NLT: 30 September 2009

1.2.1. Establish end-to-end metrics for automating at least the receipt and in-check process. [1] *NLT: 31 March 2008*

1.2.2. Monitor the measurement of technological and operational performance of equipment and middleware and automated information systems (AISs). NLT: 30 June 2009

[1] Tasking from the 23 October 2007 Joint AIT Summit.

1.2.3. Monitor the measurement of the business benefit, including ROI of AIT-enabled processes. NLT: 30 September 2009

1.2.4. Monitor operational benefits and impacts to the warfighter. NLT: 30 September 2009

1.3. Ensure that the DTR 4500.9R Defense Transportation Regulation, DOD 4140.1R Supply Chain Materiel Management Regulation, RFID policies, item unique identification (IUID) policies, Defense Federal Acquisition Regulation Supplement (DFARS), and other policies and regulations are current regarding the use of primary AIT in the receipt and in-check process. NLT: 30 September 2009

1.4. Coordinate the information assurance requirements across the teams to complete the implementation of the first spiral. NLT: 31 March 2009

1.5. Colead a pilot, with the In-Theater/Retail Team, to evaluate the active license plate tag. NLT: 30 June 2009

1.6. Coordinate with the AIT Stakeholders to Ensure Hazards of Electromagnetic Radiation to Ordnance (HERO) certification requirements are met for AIT use in specifically authorized portions of the supply chain (e.g., power levels, safe stand-off distance, tag concentration limits, and prohibited environments, etc.). Consider plans for handling mixed shipments that include Class V, Class VII, and other commodities. NLT: 30 September 2009

1.7. Define recommendations for premium AIT use. NLT: 30 September 2008

1.8. Define charter and governance structure for DoD AIT Synchronization IPT. NLT: 31 March 2008

1.9. As the implementations progress, evaluate the need for an integrated training plan. NLT: 31 March 2009

1.10 Review tasks provided in Volume II of this plan to determine the discrete actions for Spiral Two. NLT: 31 March 2009

2. Wholesale Team

2.1. Initiate material release order-level passive RFID tagging at appropriate distribution depots in support of Service identified sites. The Service pRFID plans should be collectively coordinated with DLA to establish

which DLA Distribution Depots (DDs) should be migrating to passive tagging of material.[2] NLT: 31 March 2008

2.2. Enable at least one other internal business process using the primary AIT as defined in the CONOPS. NLT: 30 September 09

2.2.1. Measure and report the baseline "as is" for the receipt/in-check process to assist in defining the benefits/impacts/ROI of the addition of RFID technologies to existing business processes. NLT: 31 March 2008

2.2.2. Reengineer the selected processes to enable automated use of RFID-tagged shipments. NLT: 30 June 2008

2.2.3. Identify and define requirements necessary to modify AIS and middleware to enable the automated use of RFID-tagged shipments within the selected processes. NLT: 30 June 2008

2.2.4. Modify AIS and/or middleware to enable the automated use of RFID tagged shipments within the selected processes.[3] *NLT: 30 June 2009*

2.2.5. Procure, install, and operate RFID equipment at the selected locations and facilities. NLT: 30 June 2009

2.2.6. Measure and report business benefit metrics, including ROI, as defined by the Global Team metrics. NLT: 30 September 2009

2.3. Ensure that information assurance requirements at wholesale locations are met in a timely manner to allow for testing of equipment and operation of reengineered business processes. NLT: 31 March 2009

2.4. Review tasks provided in Volume II of this plan to determine the discrete actions for Spiral Two. NLT: 31 March 2009

3. Strategic Distribution Team

3.1. Define operational and system (data exchanges) architecture associated with the movement and workload volume of materiel from a vendor to a container and consolidation point, vendor to an aerial port of embarkation, and vendor direct delivery to the theater. NLT: 30 June 2008

3.2. Determine requirements and plan for potential modification of AIS and/or use of middleware or other AIT interaction to enable the receipt of ad-

[2] Tasking from the 23 October 2007 Joint AIT Summit.

[3] Tasking from the 23 October 2007 Joint AIT Summit.

vanced shipment notification (machine to machine interface). NLT: 30 June 2009

3.3. Measure and report the baseline "as is" for the receipt/in-check process to assist in defining the benefits/impacts/ROI of the addition of machine-to-machine interfaces to existing business processes. NLT: 31 March 2008

3.4. Include an analysis for potential reengineering of the receipt and in-check of loose cargo and inbound pallet process at aerial ports to enable automated receipt of shipments focusing on combining the in-check and receipt sub-processes.[4] *NLT: 30 June 2008*

3.5. In coordination with the Project Manager, Alaska RFID Implementation (ARI), complete the enhancements, installation, and operation of passive RFID equipment under the Alaska RFID Implementation (ARI) and Joint Regional Inventory Material Management (JRIMM) initiatives. NLT: 30 September 2008

3.6. Measure and report business benefit metrics, including ROI, as defined by the Global Team metrics, under the Alaska RFID Implementation (ARI) and Joint Regional Inventory Material Management (JRIMM) initiatives. NLT: 30 September 2008

3.7. Ensure that information assurance requirements at strategic distribution locations are met in a timely manner to allow for testing of equipment and operation of reengineered business processes. NLT: 30 June 2008

3.8. Review tasks provided in Volume II of this plan to determine the discrete actions for Spiral Two. NLT: 31 March 2009

4. In-Theater/Retail Team

4.1. Identify a retail location within each Service that represents the retail receipt process and also receives a high volume of shipments from distribution depot(s) to begin the roll-out of this implementation plan using the primary AIT as defined in the CONOPS. NLT: 31 March 2008

4.2. Enable the automated receipt and in-check process at the selected retail locations for both transportation receiving and supply receiving using the primary AIT as defined in the CONOPS. The intent of this task is for receipts that originate from a DDC, receipts directly from a supplier will be evaluated in spiral 2. NLT: 30 September 2009

4.2.1. Measure and report the baseline "as is" for the receipt/in-check process to assist in defining the benefits/impacts/ROI of the addition of AIT to existing business processes. NLT: 31 March 2008

[4] Tasking from the 23 October 2007 Joint AIT Summit.

4.2.2. Reengineer the receipt and in-check process to enable automated receipt of RFID-tagged shipments. NLT: 30 June 2008

4.2.3. Identify and define requirements necessary to modify AIS and middleware to enable the receipt of advanced shipment notices. NLT: 30 June 2008

4.2.4. Modify AIS and/or middleware to enable the receipt of an advanced shipment notification containing AIT information. (Example is the passive RFID initiative at U.S. Submarine Base Bangor, Washington) NLT: 31 March 2009

4.2.5. Procure, install, and operate RFID equipment at the appropriate locations and facilities. Each component/agency is responsible for outfitting their facilities. NLT: 30 June 2009

4.2.6. Measure and report business benefit metrics, including ROI, as defined by the Global Team metrics. NLT: 30 September 2009

4.3. Colead a pilot with the Global Team to evaluate the active license plate tag.[5] *NLT: 30 June 2009*

4.3.1. Work with the Global Team to determine the requirements for the active RFID license plate tags. NLT: 30 September 2008

4.3.2. Determine the estimated cost for tagging vendor-stuffed containers with active RFID license plate tags versus the cost of data rich active RFID tags. NLT: 30 June 2009

4.3.3. Plan for continuous assessment and follow-on support. NLT: 30 June 2009

4.4. Ensure that information assurance requirements are met at retail and in-theater locations in a timely manner to allow for testing of equipment and operation of reengineered business processes. NLT: 31 March 2009

4.5. Review tasks provided in Volume II to determine discrete actions for Spiral Two. NLT: 31 March 2009

[5] Tasking from the 23 October 2007 Joint AIT Summit.

5. Unit Move Team

5.1. Define unit move requirements for the use of a license plate active tag to be shared with the Global and In-Theater/Retail Teams for developing the standards.[6] *NLT: 30 September 2008*

5.2. Coordinate with Global Team on changes required to synchronize OSD policy with unit movement regulations and policy documents (also refer to Global Team Task 1.3). NLT: 31 March 2009

5.3. Review tasks provided in Volume II to determine the discrete actions for Spiral Two. NLT: 31 March 2009

5.4 In conjunction with Joint Staff J4 and USTRANSCOM, monitor unit move related AIT process improvement efforts regarding redeployment. NLT: 31 Dec 08.

5.4.1 Recommend to the Global Team opportunities to incorporate AIT considerations into ongoing or future redeployment process improvement efforts. NLT: 30 Sep 08.

5.4.2 Capture the "As-Is" unit move AIT redeployment process and recommend further changes to the Global Team. NLT: 31 Dec 08.

Spiral Two

Spiral Two (FYs 2010–2011) will be comprised of additional discrete tasks based on results from Spiral One and consideration of the tasks provided by the implementation teams in Volume II. The goal of Spiral Two will be to expand the use of AIT within supply and distribution operations to enable additional business benefits realized in Spiral One. Detailed timelines for this spiral will be provided by the implementation teams by 31 August 2009 as part of the DoD AIT Synchronization IPT meetings and in subsequent editions of this document.

Spiral Three

Spiral Three (FYs 2012–2015) will be comprised of new tasks that build on knowledge/experience gained from Spirals One and Two, and consideration of the tasks provided by the implementation teams in Volume II. Detailed timelines for this spiral will be provided by the implementation teams at the regularly scheduled DoD AIT Synchronization IPT meetings and in subsequent editions of this document.

All annexes in Volume II should be reviewed for additional tasks in Spirals Two and Three. The annexes contain useful details about each task; the gaps between

[6] Tasking from the 23 October 2007 Joint AIT Summit.

the current and future states; the key organizations involved in various business processes, and the business sub-process and metrics that apply to the task.

FUNDING AND RESOURCES

Each task requires a commitment of funding and personnel resources. DOD Components/Agencies must have and will commit necessary resources to accomplish tasks in this plan at their respective sites. That commitment must be accomplished within current annual budgets and personnel resources, as outlined in each Service's POM. Each task dictates a different level of effort and funding. In turn, resource requirements will be influenced by several factors, including task scope; length, number, and grade of personnel (both internal DoD and contractor support); travel; and training costs. Some tasks may also entail facility, hardware, software, communications, and maintenance costs.

It is essential that the senior leaders who attended the 23 October 2007 DoD AIT Summit identify the resources and work within their organizations to make those resources available to implement their respective tasks. Services, DLA, and USTRANSCOM have already provided AIT-related requirements into the 2008–2013 future years defense program prior to the development of this implementation plan. The consensus among the senior leadership was that the primary challenge would be successfully synchronizing programmed AIT dollars to achieve the vision set out in the DoD AIT CONOPS.

The total amounts projected during this period for AIT requirements are listed below, however, they are subject to reprioritization within the Services. AIT stakeholders are encouraged to work to limit reprioritization of this important ITV enabler and force multiplier.

- FY 2008: $119 million
- FY 2009: $119 million
- FY 2010: $123 million
- FY 2011: $126 million
- FY 2012: $129 million
- FY 2013: $128 million
- Total = $744 million.

This funding is associated with the first iteration of this document. The goal is to maintain an accurate picture of future funding with each revision and to share that information across the Services and Agencies to leverage the investment results of others and avoid duplicative spending.

CONSIDERATIONS

The considerations described below were taken into account when developing the implementation plan tasks.

Key Assumptions

The following assumptions apply to all implementation teams:

- *Connectivity*—Assured connectivity will occur by FY 2013, in accordance with the information provided by the Army G-4 during the CONOPS formulation.
- *Data Exchange Standards* –All systems will be moving to compliance with Defense Logistics Management System (DLMS)/Defense Transportation Electronic Business (DTEB) standards.
- *Bar code backup*—All layers will have a bar code and human-readable text to supplement other AIT, such as passive or active RFID.
- *CONOPS driving goal*—The CONOPS is the founding document for all tasks identified by the implementation teams. The purpose of every team task is to work toward the CONOPS vision, not to re-evaluate the CONOPS recommendations. If any team indicates a valid reason for a change or exception to the CONOPS AIT designations, the change or exception will be presented and considered through the governance procedures and may drive a future CONOPS spiral.

Information Assurance

The use of AIT is critical to the logisticians' business process. AIT data collection peripheral devices, which link to a DoD AIS, must be considered an integral part of the Global Information Grid (GIG). Therefore, Information Assurance (IA) protections must exist between the peripheral device and the AIS. AIT media (e.g., RFID tags and high-capacity bar codes) are often generated outside DoD control and considered external data sources. As such, it is incumbent upon the Combatant Commands (COCOMs), Services, and Agencies to develop, acquire, and field AIT in accordance with established IA and information security policies, expanding the IA boundaries outward to encompass AIT devices where required. The policies and procedures outlined in DoDD 5200.1-R, *Information Security Program;* DoDD 8500.1, *Information Assurance;* DoDI 8500.2, *Information Assurance Implementation;* DoDD 8100.02, *Use of Commercial Wireless Devices, Services, and Technologies in the Department of Defense (DoD) Global Information Grid (GIG);* DoDI 8510.01, *DoD Information Assurance Certification and Accreditation Process*, Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3213.01B, *Joint Operations Security;* CJCSI 6211.02B, *Defense Information Sys-*

tem Network (DISN): Policy, Responsibilities Processes; CJCSI 6510.01D, *Information Assurance and Computer Defense*, and National Institute of Standards and Technology (NIST) Special Publication 800-98, *Guidelines for Securing Radio Frequency Identification (RFID) Systems* provide the technical implementation guidance necessary to ensure that the introduction of AIT is done within the guidelines associated with being part of the GIG.

Standards

DoD's application of the various AIT technologies should be based to the maximum extent practical on consensus-based commercial standards (national and international), as described in Public Law 104-113 and Office of Management and Budget (OMB) Circular 119A. Use of these voluntary consensus standards, such as those by EPCglobal [tm], provides lower cost alternatives to unique military solutions and facilitates interoperability with technologies used by the commercial and international partners.

The objective of DoD standardization is interoperability between products designed to perform the same or similar functions. In a military context, standardization is defined as the development and implementation of concepts, doctrines, procedures, and designs to achieve and maintain the required levels of compatibility, interchangeability, or commonality in the operational, procedural, materiel, technical, and administrative fields to attain interoperability.

Annex 7 in Volume II contains a brief discussion of standards and a list of the current applicable standards.

Chapter 3
Plan Management and Update Process

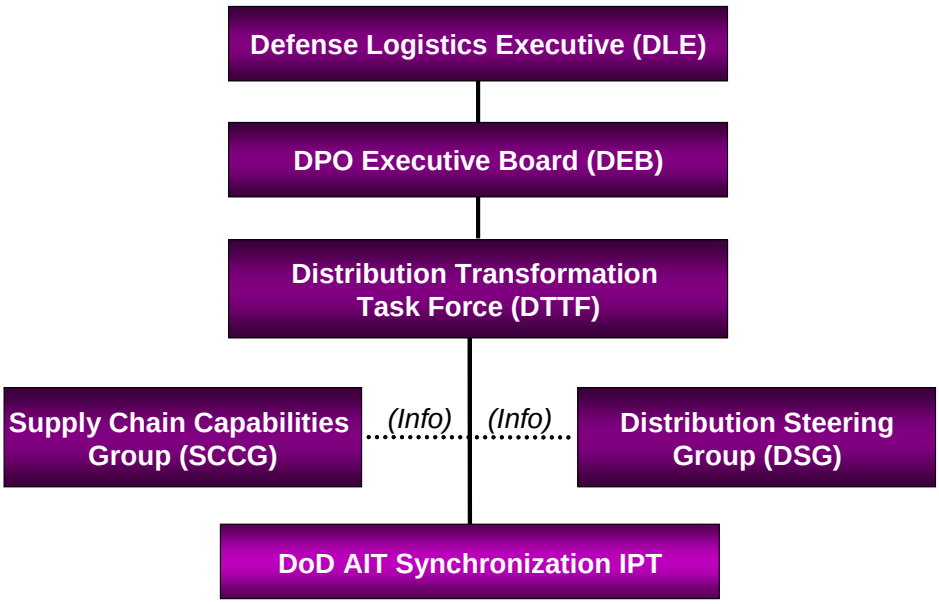
This chapter identifies the organizations that are involved in governance of the AIT implementation plan, along with their roles and responsibilities. It also describes the process for keeping the plans current. Because the plan is a living document and will be updated throughout the implementation phases, an update process is required.

GOVERNANCE

USTRANSCOM executes its mission as DPO by coordinating with its national partners to improve collaborative planning and execution in support of joint distribution operations. Its national partners include USD(AT&L); Deputy Undersecretary of Defense for Logistics and Materiel Readiness (DUSD[L&MR]); DLA; Joint Staff Logistics Directorate (JS J-4); JFCOM; Service and COCOM logistics commands and directorates; and USTRANSCOM's three component commands: Military Surface Deployment and Distribution Command (SDDC), Military Sealift Command (MSC), and Air Mobility Command (AMC).

Figure 3-1 illustrates the AIT governance structure.

Figure 3-1. AIT Governance Structure



Defense Logistics Executive

The Secretary of Defense has designated the USD(AT&L) as the Defense Logistics Executive (DLE) with authority to make changes necessary to integrate DoD's entire supply chain. In coordination with the Chairman of the Joint Chiefs of Staff, the DLE prepares all directives, instructions, regulations, and decision memos, and suggests legislative changes. The DLE will ensure alignment with the Joint Logistics Portfolio structure.

The DLE is the final authority on AIT use in the supply chain.

DPO Executive Board

The DPO Executive Board (DEB) is the senior decision-making body charged with implementing DPO initiatives. Chaired by the Commander, USTRANSCOM, the DEB's membership includes Director, DLA; USD (AT&L); DUSD (L&MR); and Director, JS J-4.

The DEB makes all decisions related to AIT use that required elevation from the Distribution Transformation Task Force (DTTF).

Distribution Transformation Task Force

The DTTF is chaired by the Deputy Commander, USTRANSCOM, and includes senior military logisticians from the Assistant Deputy Under Secretary of Defense (Transportation Policy), or ADUSD (TP); Joint Staff; DLA; Services; COCOMs; and Agencies. The members, at the one-to-three-star level, identify and propose distribution process improvement opportunities and solutions. The DTTF meets quarterly.

The DTTF is tasked with 1) advising the Commander, USTRANSCOM, as the DPO and Chairman of the DEB, on distribution-related activities; 2) serving as a clearinghouse for coordinating and synchronizing COCOM, Service, DLA, and USTRANSCOM distribution and sustainment process improvement activities; 3) forwarding recommendations on distribution process initiatives affecting Service- or COCOM-sponsored programs to the DEB for review and approval; and 4) providing guidance to the Distribution Steering Group (DSG) on distribution process initiatives.

The DTTF also provides direction to the DoD AIT Synchronization IPT and its implementation efforts.

Supply Chain Capabilities Group

The Supply Chain Capabilities Group (SCCG) is co-chaired by the ADUSD(SCI) and ADUSD(TP). SCCG members, at the two-star level, include supply chain

experts from each Service and Agency. The SCCG provides a forum for DoD logistics business process owners to incorporate best business practices in logistics processes and deliver supply chain capability required to support the warfighter.

The SCCG's objectives are 1) maintain currency with significant supply chain initiatives such as AIT implementation, commodity councils, and readiness-based sparing through monthly meetings; 2) expose DoD supply chain leaders to innovative pilot initiatives across components; 3) expose DoD supply chain leaders to relevant commercial best practice thinking; and 4) encourage cross-component collaboration by sponsoring working groups with defined deliverables.

The DoD AIT Synchronization IPT keeps the SCCG informed on the progress of AIT implementation efforts.

Distribution Steering Group

The Distribution Steering Group (DSG), a joint DoD distribution working-level group at the O-6/GS-15 level, represents the principal DPO national partners in support of the warfighter. The DSG is co-chaired by the Director, USTRANSCOM J5/4 (Strategy, Policy, Programs and Logistics) and Director, DLA J3 (Logistics Operations). The Director, USTRANSCOM J6 (Command, Control, Communications and Computer Systems) serves as the Distribution Portfolio Management Chair and provides an information technology (IT) perspective The DSG membership includes representatives from USTRANSCOM, DLA, Joint Staff, OSD, COCOMs, Services, and other government agencies involved with improving distribution processes.

The DSG is specifically focused on improving the overall effectiveness, efficiency, and interoperability of distribution-related activities supporting the JDDE. It serves as a single DPO clearinghouse for distribution solution sets, both functional and IT, and as a single venue for vetting issues before submission to the DTTF. The DSG's overall effect is a streamlined governance structure where functional requirements drive IT solutions in a collaborative environment.

The DoD AIT Synchronization IPT keeps the DSG informed on the progress of AIT implementation efforts.

DoD AIT Synchronization IPT

The DoD AIT Synchronization IPT, co-chaired by OSD/SCI and USTRANSCOM, reports directly to the DTTF. This IPT is the DoD authoritative group for logistics AIT. It synchronizes the efforts of all stakeholders involved in the implementation of DoD's vision for AIT, as documented in the AIT CONOPS. It is responsible for oversight of all AIT implementation plan task team efforts, all issues at the supply and transportation segment seams, and all issues that affect the overall supply and distribution performance. The team is further responsible for resolving all follow-on actions required for full implementation of the CONOPS vision.

Membership of the IPT includes representatives from the following AIT stakeholders:

- Services
- OSD/SCI
- USTRANSCOM
- JS J-4
- DLA
- COCOMs
- National partners
  - Army and Air Force Exchange Service
  - General Services Administration
  - Defense Commissary Agency
  - Navy Exchange
- Other invited DoD and commercial partners, as necessary.

The DoD AIT Synchronization IPT convenes regularly, either in meetings or teleconferences. It reports to the DTTF, but provides informational briefs about its initiatives and activities to the DSG and SCCG. (It may request some of its members, such as a Service or DLA, to provide a briefing as well to ensure conformity and consistency among the AIT community.) It further charters subgroups as needed to pursue AIT implementation initiatives. The subgroups report all results and issues back to the IPT.

When new AIT technologies are identified, the USTRANSCOM Asset Visibility Division (TCJ5/4-I) and Service AIT offices review and assess the technologies and make recommendations to the IPT regarding their potential application within DoD. The IPT also steers the decisions for use of the new technologies and recommends policies and guidelines as needed.

MANAGEMENT AND UPDATE PROCESS

Each of the team leaders, together with Service and Agency representatives, will present their progress, results and any unresolved issues on a regular basis to the DoD AIT Synchronization IPT. These presentations should provide an accurate assessment of each team's efforts and will become the basis for presentations made to the more senior oversight officials up to and including the Defense Logistics Executive.